



Acoustical Society of America

OFFICE OF THE
STANDARDS SECRETARIAT

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Fax:	(757) 825-1134 (301) 621-0134	# of Pages (including cover sheet):	5 pages
Phone:		Date / time:	22-Apr-02
Re:		CC:	

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Confidential

• **Comments:**

Dear Ms. Streeks,

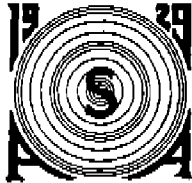
In response to the letter sent by Ms. Reddic, which was received in this office on 19 April 2002, I am enclosing the following final reports for Grant NAG-1-2140:

Summary of Research

If additional information is required, please let me know.

Thank you,

Susan B. Blaeser
Standards Manager



ACOUSTICAL • SOCIETY • OF • AMERICA

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22 April 2002

R. Todd Lacks
Grants Office, Mail Stop 126
NASA Langley Research Center
Hampton, VA 23681-2199

Final Report for Grant/Cooperative Agreement Number NAG-1-2140

Dear Mr. Lacks,

I must first apologize for the lateness of this report. I appreciate the notice sent by Ms. Reddic's letter of April 4, 2002. Unfortunately that letter was sent to our old address and delivered here on Friday, 19 April 2002. For the record, please note our new address above. I believed that you were notified of the address change last year, but apparently this did not occur or was not recorded. Also for the record, as was reported in January 2001, Avril Brenig retired on 31 December 2000. I succeeded her as Standards Manager of the Acoustical Society of America on 1 January 2001.

We would like to thank NASA for its support of the ASA Standards program over the three-year grant period. Standards development is a painstakingly slow process but over the three-year period of this grant, we are pleased to report that much has been accomplished.

As outlined in the statement of work dated November 1998, the Acoustical Society of America provides the Secretariats for 4 ANSI Accredited Standards Committees:

- S1 Acoustics
- S2 Mechanical Vibration and Shock
- S3 Bioacoustics
- S12 Noise.

Under these national standards committees there are approximately 65 working groups of which about 35 were active at the time the application to NASA was made. During the course of the grant, the Acoustical Society, with support from NASA, worked to expedite the development of the work items in these committees. The NASA Grant helped support the direct and indirect costs associated with the work of these working groups and the Standards Committees. The work elements included such things as coordination of meetings (excluding travel); preparation and distribution of documents for review and ballot; supporting the development of new technical areas for standardization

under these committees; review of the feasibility, scope and drafting of new standards; and preparation of reports and delivery of one copy of each newly developed standard to NASA.

ACCOMPLISHMENTS DURING THE GRANT PERIOD

#1) 10 new American National Standards were adopted and published

The following American National Standards were processed through the working groups and submitted for ballot to the Accredited Standards Committees according to the approved operating procedures of the Committees.

ANSI S1.16-2000 American National Standard for Measuring the Performance of Noise Discriminating and Noise Canceling Microphones

ANSI S1.17-2000/Part 1 American National Standard Microphone Windscreens – Part 1: Measurements and Specification of Insertion Loss in Still or Slightly Moving Air

ANSI S1.18-1999 American National Standard Template Method for Ground Impedance

ANSI S1.42-2001 American National Standard Design Response of Weighting Networks for Acoustical Measurements

ANSI S2.24-2001 American National Standard Graphical Presentation of the Complex Modulus of Viscoelastic Materials

ANSI S2.25-2001 American National Standard Guide for the Measurement, Reporting, and Evaluation of Hull and Superstructure Vibration in Ships

ANSI S2.26-2001 American National Standard Vibration Testing Requirements and Acceptance Criteria for Shipboard Equipment

ANSI S3.1-1999 American National Standard Maximum permissible Ambient Noise Levels for Audiometric Test Rooms

ANSI S3.45 American National Standard Procedures for Testing Basic Vestibular Function

ANSI S12.9-2000/Part 6 American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound – Part 6: Methods for Estimation of Awakenings Associated with Aircraft Noise Events Heard in Homes

#2) 5 International Standards were adopted as dual-numbered American National Standards and published

These five international standards were reviewed by the working groups and submitted for ballot to the Accredited Standards Committees according to the approved operating procedures of the Committees. Many of the Working Group members were also members of the corresponding international working groups and thus were actively involved in the development of these standards. Where it is possible, the national adoption of international standards is considered desirable in that it creates a worldwide standard rather than having different standards in each country.

ANSI S2.1-2000 ISO 2041:1990 Nationally Adopted International Standard Vibration and Shock Vocabulary

ANSI S12.53/1-1999 ISO 3743-1:1994 Nationally Adopted International Standard Acoustics – Determination of sound power levels of noise sources – Engineering methods for small, moveable sources in reverberant fields – Part 1: Comparison method for hard walled test rooms

ANSI S12.53/2-1999 ISO 3743-2:1994 Nationally Adopted International Standard Acoustics – Determination of sound power levels of noise sources using sound pressure - Engineering methods for small, moveable sources in reverberant fields – Part 2: Methods for special reverberant test rooms

ANSI S12.54-1999 ISO 3744:1994 Nationally Adopted International Standard Acoustics – Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane

ANSI S12.56-1999 ISO 3746:1995 Nationally Adopted International Standard Acoustics – Determination of sound power levels of noise sources using sound pressure – Survey method using an enveloping measurement surface over a reflecting plane

#3) 6 draft American National Standards were balloted (not yet adopted or published)

Draft ANSI TR S1.24 Draft ANSI Technical Report Bubble Detection and Cavitation Monitoring

(This Technical Report has been approved for publication by Accredited Standards Committee S1 and is expected to be published by the summer 2002.)

DRAFT S1.11-200x Draft American National Standard Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters

(This draft has been balloted and one negative vote is being resolved according to the operating procedures of ANSI Accredited Standards Committee S1.)

DRAFT S1.15-200x Part 2 Draft American National Standard Measurement Microphones - Part 2: Primary Method for Pressure Calibration of Laboratory Standard Microphones by the Reciprocity Technique

(This draft standard has been balloted and approved and comments are currently being resolved according to the operating procedures of ANSI Accredited Standards Committee S1.)

DRAFT S12.13 Draft American National Standard Evaluating the Effectiveness of Hearing Conservation Programs

(This draft standard was balloted and many negative votes were received. The document has been revised as a Technical Report and has recently been re-balloted to the Committee for consideration.)

DRAFT S12.60-200x Draft American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for School Classrooms and other Learning Spaces

(This document was balloted and 2 negative votes resulted. In time, one vote was resolved and one outstanding negative vote remained. The objection was recently the subject of an appeal according to the process described in the operating procedures of ANSI Accredited Standards Committee S12. The appeals panel has not rendered its decision as yet.)

DRAFT S12.60-200x Draft American National Standard Declaration and Verification of Noise Emission Values of Machinery and Equipment

(This document was balloted and one negative vote received. Comments and objections are currently being resolved according to the operating procedures of ANSI Accredited Standards Committee S12.)

#4) Other National Standards Ballots processed by the Secretariat

In addition to these primary accomplishments, the Secretariat also copied, distributed and balloted the following items:

- 65 American National Standards were subjected to the 5-year reviews and reaffirmed; and
- 1 American National Standard was subjected to the 5-year review and withdrawn;

#5) US Positions on International Standards Activities processed by the Secretariat


Finally, functioning in their roles as the ANSI-Accredited US TAGs to ten ISO or IEC technical committees and/or subcommittees, the members of the standards committees reviewed and formulated the US positions on 226 draft international standards at various stages of development. Each of these documents was received by the Secretariat, announced to the appropriate committee, copied, distributed and the US position processed through ANSI.

#6) Reporting

The Accredited Standards Committees meet annually and NASA has received annual copies of the reports of each Committee. NASA has also received copies of the standards adopted during the course of this contract.

On behalf of the Acoustical Society of America Standards Secretariat, I want to thank you for the support you have provided over the last three years. We believe that NASA can be proud of the work that was accomplished with this support and hope that NASA will consider supporting ASA Standards in the future.

Sincerely,


Susan B. Blaesus
Standards Manager

Cc: Elaine C. McMahon, Patent Counsel Office
Kevin P. Shepherd, Technical Officer
Jackie Streets, NASA CASI
Daniel L. Johnson, ASA